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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Curtis W. Dodd		DOAN, KIET M		
2803 Bentley Street		ART UNIT		
Huntsville, AL 35801		PAPER NUMBER		
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2
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/077,074

Applicant(s)

SANDERSON, LELON WAYNE

Examiner

Kiet Doan

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Reyes (Pub. No. 2003/0006881) in view of Beyers, II et al. (Patent No. 5,235,619).

Consider **claim 1**, Reyes teaches a method for extending the range of an RF communication system using a high voltage (HV) cable and neutral cable as the transmission channel, where the HV cable is simultaneously carrying low-frequency current (Page 1, Paragraph 14, Page 2, Paragraph 34 teach AC power line with RF and amplifier which extending RF in communication and cable carry low frequency which inherently have long been know). Reyes teaches claimed the limitation as above but fail to teach the method comprising the steps of: transmitting over the transmission channel, an RF signal from a central location downstream towards a remote location; splitting the HV cable into an upstream RF segment and a downstream RF segment where the segments are RF isolated and low-frequency connected; receiving the RF signal from the upstream RF segment at a first port of a reconditioner; directing a reconditioned RF signal from a second port of the reconditioning device to the downstream RF segment of the HV cable.

In the same field of endeavor, Beyes teach "Cable Television Radio Frequency Subscriber Data Transmission Apparatus And RF Return Method". Further, Beyes teaches the method comprising the steps of: transmitting over the transmission channel, an RF signal from a central location downstream towards a remote location (Col 6, lines 15-20, Col 8, lines 18-33 teach transmitting RF signal in bidirectional which would be central to remote location) splitting the HV cable into an upstream RF segment and a downstream RF segment where the segments are RF isolated and low-frequency connected (Col 9, lines 25-46, Fig.1 No.143 teach splitting the Upstream and downstream and receive different signal) receiving the RF signal from the upstream RF segment at a first port of a reconditioner (Col 9, lines 30-35,67-68, Col 10, lines 1-23 teach upstream RF segment) directing a reconditioned RF signal from a second port of the reconditioning device to the downstream RF segment of the HV cable (Col 9, lines 39-45, Col 10, lines 32-44 teach downstream RF segment).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant invention to included, within Reyes system, cable television radio frequency, as taught by Beyers to modify the power cable extending the range of an RF that would provided a single network connection as a convenient to the users.

Consider **claim 2**, Reyes teaches the apparatus wherein the RF isolation is provided by a low pass filter comprising blocking inductors and at least one capacitor for RF attenuation (Page 2, Paragraph 36, Page 3, Paragraph 37, 42-43 teach provided attenuated with bandpass filter which means as low pass filter).

Consider **claims 3 and 4**, Reyes teaches the apparatus wherein the reconditioner is a (repeater) regenerator (Page 2, Paragraph 35, Fig.1c No.152, 154,156 teach cascade amplifier means as repeater and regenerated).

Consider **claim 5**, Reyes teaches the apparatus wherein the directing step utilizes a series capacitor and inductor arrangement with a connection going from the juncture of the capacitor and inductor to the reconditioner (Page 4, Paragraph 53, Fig.4 teach juncture of capacitor and inductor).

Consider **claim 6**, further Beyers teaches the apparatus wherein the steps are adapted for two-way communication (Col 6, lines 15-22, Col 10, lines 1-8 teach bidirectional transmission which means as two way communication).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reyes (Pub. No. 2003/0006881) in view of Beyers, II et al. (Patent No. 5,235,619).

Consider **claim 7**, Reyes teaches a method for extending the range of an RF communication system using a high voltage cable as the transmission channel (Page 1,

Art Unit: 2683

Paragraph 14 lines 1-8 teach RF using power line) comprising the steps of: forming a first RF segment and a second RF segment of the HV cable (Page 2, Paragraph 34 teach first and second RF segment) coupling the segments to ports on a reconditioning device (Page 1, Paragraph 14, lines 8-14, Page 3, Paragraph 45 lines 1-4 teach coupling on the amplifier which means as reconditioning) and reconditioning RF signals from each of the segments (Page 3, Paragraph 45, lines 4-15 teach reconditioning RF signal by the amplifier).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant invention to included, within Reyes and Beyers system to modify the extending the range of an RF communication that would provided a clean and clear RF signals.

Consider **claim 8**, further Beyers teaches the apparatus wherein the forming step is provided by a low pass filter (Col 13, lines 45-47 teach low pass filter).

Consider **claim 9**, Reyes teaches the apparatus wherein the coupling step is provided by a lightning arrester in series with a ferrite clamped on a cable (Page 3, Col 1, lines 7-9, Paragraph 42, lines 1-5 teach ferrite and coupled).

Consider **claim 10**, Reyes teaches wherein the reconditioning step includes amplification and equalization (Page 2, Paragraph 35 teach amplifier which inherently contain equalization).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claim 11**, rejected under 35 U.S.C. 103(a) as being unpatentable over Reyes (Pub. No. 2003/0006881) in view of Beyers, II et al. (Patent No. 5,235,619) and further in view of Laubach et al. (patent No. 6,075,972).

Consider **claim 11**, Reyes and Beyers teaches the claimed limitation as above but fail to teach the apparatus wherein the reconditioning step is provided by a regenerator having at least demodulation, decoding, encoding and modulation.

In the same field of endeavor, Laubach teach "CATV Network And Cable Modem System Having a Wireless Return". Further, Laubach teaches the apparatus wherein the reconditioning step is provided by a regenerator having at least demodulation, decoding, encoding and modulation (Col 4, lines 50-67, Col 8, lines 14-17, Fig.1 No.109 teach number of amplifier and downstream signal demodulation, decoding, encoding and modulation process by cable modem).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant invention to included, within Reyes and Beyers system, CATV network and cable modem, as taught by Laubach to modify the system that would provided to the users a better transparent on the modulation schemes.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 12, 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Reyes (Pub. No.2003/0006881).

Consider **claim 12**, Reyes teaches an apparatus for isolating RF signals in a broadband data communication system having a HV cable and a neutral cable as a communication channel (Page 2, Paragraph 33 teach power cable and neutral line) the apparatus comprising: a first RF signal on the HV cable (Page 2, paragraph 34 teach first hot line means as first RF signal) a second RF signal on the HV cable (Page 2, paragraph 34 teach second hot line means as second RF signal) an isolation filter for electrically isolating the first RF signal from the second RF signal (Page 5, claim 6 ,line 4-6 teach isolation the first RF signal from the second RF signal) the isolation filter comprising a ladder network of one or more ferrites clamped on the HV cable and one or more capacitors connected between the HV cable and the neutral cable; RF couplers on each side of the isolation filter for coupling the RF signals to ports of a reconditioner (Page 2, Paragraph 36, Page 3, Paragraph 42 teach isolation and ferrites bead on

Art Unit: 2683

amplifier/inductor which obvious clamped on the power cable and coupled to amplifier means as reconditioner).

Consider **claim 14**, Reyes teaches the apparatus wherein the one or more capacitors is a power factor correction capacitor (Page 4, Paragraph 52 teach capacitor is power factor on the AC line).

Consider **claim 15**, Reyes teaches the apparatus wherein the RF signals are greater than 20 MHz. (Page 2, Paragraph 28, lines 1-3 teach RF signals greater than 20MHz.).

Consider **claim 16**, Reyes teaches the apparatus wherein the reconditioner has a processor for monitoring voltage levels within the reconditioner (Page 3, Paragraph 39, 40 teach amplifier means as reconditioner coupled to toroidal transformer which would be control and monitor voltage level).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 17-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Reyes (Pub. No. 2003/0006881) in view of Beyers, II et al. (Patent No. 5,235,619).

Consider **claims 17-18**, Reyes teaches the claims 12, 14-16 limitations but fail to teach the apparatus wherein the reconditioner is a two-way repeater/generator.

In the same field of endeavor, Beyes teach "Cable Television Radio Frequency Subscriber Data Transmission Apparatus And RF Return Method". Further Beyes teaches teach the apparatus wherein the reconditioner is a two-way repeater/generator (Col 8, lines 45-47, Col 10, lines 1-5, Fig.1 No.142 teach amplifier means as reconditioner is a two-way repeater/two way generator).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant invention to included, within Reyes and Beyers system, to modify the system that would provided far/strong signals.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claim 13** rejected under 35 U.S.C. 103(a) as being unpatentable over Reyes (Pub. No. 2003/0006881) in view of Beyers,II et al. (Patent No. 5,235,619) and further in view of Laubach et al. (patent No. 6,075,972).

Consider **claim 13**, Reyes, Beyers and Laubach disclose the invention but does not disclose the apparatus wherein the isolation filter is a symmetric filter. However, it would have been an obvious matter of design choice to have isolation filter is a symmetric filter in the system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant invention to included isolation filter is a symmetric filter to modify the system that provided clean and clear communication.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claim 19**, rejected under 35 U.S.C. 103(a) as being unpatentable over Reyes (Pub. No. 2003/0006881) in view of Laubach et al. (patent No. 6,075,972).

Consider **claim 19**, Reyes teaches a reconditioning circuit for a PLCC where an high voltage cable and a neutral are the communication channel and where the high voltage cable simultaneously transport low frequency current for electrical power and communication signals for broadband data service (Page 2, Paragraphs 30-34 teach power line communication transmitting signals which would be obvious that low frequency is long been know as describe at Page 1, Paragraph 10). Reyes teaches the claim limitation but fail to teach the reconditioning circuit comprising: a low-pass filter

two RF couplers connected to opposite ends of the low-pass filter; a reconditioner connected between the other ends of the couplers the; reconditioner comprising at least amplifiers for boosting the communication signals strength.

In the same field of endeavor, Laubach teach " CATV Network And Cable Modem System Having A Wireless Return Path". Further, Laubach teaches the reconditioning circuit comprising: a low-pass filter (Col 7, lines 60-67 teach filter means as low pass filter and amplifier means as reconditioner). two RF couplers connected to opposite ends of the low-pass filter (Col 8, lines 61-63, Fig.2, No.207, 209 teach two RF coupler) a reconditioner connected between the other ends of the couplers (Col 8, lines 55-63. Fig.2 No. 109 teach amplifier means as reconditioner between coupler) the reconditioner comprising at least amplifiers for boosting the communication signals strength (Col 8, line15, Fig.2, No. 109 teach amplifier means as reconditioner boosting communication).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant invention to included, within Reyes system, CATV network and cable, as taught by Laubach to modify the system that would provided a strong transmission in RF in different direction.

Consider **claims 20-21**, Beyes teaches teach the apparatus wherein the reconditioner is a two-way repeater/generator (Col 8, lines 45-47, Col 10, lines 1-5, Fig.1 No.142 teach amplifier means as reconditioner is a two-way repeater/two way generator).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claim 22**, rejected under 35 U.S.C. 103(a) as being unpatentable over Reyes (Pub. No. 2003/0006881) in view of Laubach et al. (patent No. 6,075,972).

Consider **claim 22**, Reyes teaches an apparatus for RF by-passing a power factor correction capacitor on a high voltage cable and directing communication signals to a reconditioner (Page 4, paragraphs 48, 51 and 53 lines 6-8 teach capacitor connected to AC power line which include amplifier means as reconditioner) the apparatus comprising: a plurality of ferrites clamped on the capacitor cable coupling the high voltage cable to the capacitor (Page 3, Paragraphs 41,42 teach ferrites and capacitor coupled). Reyes disclose the invention but fail to teach and couplers connected to the high voltage cable and the reconditioner.

In the same field of endeavor, Laubach teach " CATV Network And Cable Modem System Having A Wireless Return Path". Further, Laubach teaches and couplers connected to the high voltage cable and the reconditioner (Col 8, lines 16-18, 55-63 teach coupler connect to coax which would contain voltage and amplifier means as reconditioner).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant invention to included, within Reyes system, CATV network and cable, as taught by Laubach to modify the system that better and reliable connection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claim 23-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Reyes (Pub. No. 2003/0006881) in view of Laubach et al. (patent No. 6,075,972) and further view of Beyers,II et al. (Patent No. 5,235,619).

Consider **claims 23-24**, Reyes and Laubach teach claimed 22 limitation but fail to teach the apparatus wherein the reconditioner is a two-way repeater/generator.

In the same field of endeavor, Beyers teach "Cable Television Radio Frequency Subscribes Data Transmission Apparatus And RF Return Method". Further Beyes teaches the apparatus wherein the reconditioner is a two-way repeater/generator (Col 8, lines 45-47, Col 10, lines 1-5, Fig.1 No.142 teach amplifier means as reconditioner is a two-way repeater/two way generator).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant invention to included, within Reyes and Beyers system, to modify the system that would provided the signals go far and strong.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claim 25 rejected under 35 U.S.C. 102(e) as being anticipated by Beyers,II et al. (Patent No. 5,235,619).

Consider **claim 25**, Beyers teaches an apparatus distributing RF communication signals from a HV cable to and from a plurality of branch circuits (Col 10, lines 1-23, Fig.1 teach distributing RF as a “tree” configured and connect to drop branch) the apparatus comprising: a plurality of low pass filters for RF isolating the HV cable from each of the branch circuits (Col 13, lines 46-67, Fig.5 No.506 teach low pass filter which would be operated on one branch) a plurality of couplers where one coupler is connected to the HV cable and to each of the branch circuits (Col 45 ,lines 50-53, Fig.11a, No.1108 teach coupler is connected to the HV cable on one branch) and a reconitioner having a HV cable port and a branch port for each of the branch circuits (Col 45, lines 38-54, Fig.11a, No.1106 teach amplifier means as reconitioner on one branch) the reconitioner having amplifiers and filters for directing and conditioning the

communication signals (Col 44, lines 35-41, Fig.9 teach amplifier, filter and directing and conditioning the communication signals).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beyers, II et al. (Patent No. 5,235,619) in view of Reyes (Pub. No. 2003/0006881).

Consider **claims 26-27**, Beyers teaches claimed 25 limitation but fail to teach the apparatus wherein the reconditioner is a (repeater)/regenerator.

In the same field of endeavor, Reyes teach "System And Method For Power Line Communication". Further, Reyes teaches the apparatus wherein the reconditioner is a (repeater) regenerator (Page 2, Paragraph 35, Fig.1c No.152, 154,156 teach cascade amplifier means as repeater and regenerated).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant invention to included, within Beyers and Reyes system, to modify the system that would provided the signal go far and strong.

Consider **claim 28**, further Reyes teaches the apparatus of wherein the RF frequencies are in the band from 20 MHz to 200 MHz (Page 2, Paragraph 28, lines 1-3

teach RF frequencies are in the band from 20 MHz to 200 MHz).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12 Claims 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reyes (Pub. No. 2003/0006881) in view of Laubach et al. (patent No. 6,075,972).

Consider **claim 29**, Reyes teaches an apparatus coupling a communication signal from a transmission cable feeding a distribution substation to a distribution cable exiting the distribution substation (Page 3, paragraph 45 teach coupling circuit transmit and distribution and feed RF signals) the apparatus comprising: a transmission/distribution blocking filter for blocking the communication signal from entering the distribution substation by way of the transmission/distribution cable (Page 3, Paragraph 40 teach the toroidal transformer control the hazardous which would be blocking the communication from entering distribution substation). Reyes teach the claim limitation but fail to teach a transmission/distribution coupler connected to the transmission/distribution cable and a reconitioner having ports connected to the couplers, the reconitioner.

In the same field of endeavor, Laubach teach " CATV Network And Cable Modem System Having A Wireless Return Path". Further, Laubach teaches a

transmission/distribution coupler connected to the transmission/distribution cable (Col 9, lines 19-20 teach coupler connect on transmission cable) and a reconditioner having ports connected to the couplers, the reconditioner (Col 8, lines 16-18, 55-63 teach amplifier means as reconditioner connect to the coupler).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant invention to included, within Reyes system, CATV Network and cable, as taught by Laubach to modify the system that would provided the use of coupler to distribution signal go to different direction.

Consider **claims 30 and 31**, Reyes teaches the apparatus wherein the reconditioner is a (repeater) regenerator (Page 2, Paragraph 35, Fig.1c No.152, 154,156 teach cascade amplifier means as repeater and regenerated).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reyes (Pub. No. 2003/0006881) in view of Laubach et al. (patent No.6,075,972).

Consider **claim 32**, Reyes teach an apparatus for coupling a communication signal on an RF coaxial cable to HV cable for upstream and downstream communication (Page 2, Paragraph 34 teach coupling with RF on power line communication) the apparatus comprising; a low pass filter for isolating the segmenting the HV cable to a downstream side and an upstream side (Col 7, line 65-67, Col 8, lines 1-7 teach filter which would be as low pass filter and operated in two way communication). Reyes teaches the claim limitation but fail to teach a reconitioner having a coaxial port for receiving the coaxial cable and two HV cable ports and two couplers for coupling the HV cable ports to each side of the HV cable.

In the same field of endeavor, Laubach teach " CATV Network And Cable Modem System Having A Wireless Return Path". Further, Laubach teaches a reconitioner having a coaxial port for receiving the coaxial cable and two HV cable ports (Col 8, lines 49-60, Fig.2 No.202,109 teach coaxial cable having amplifier) and two couplers for coupling the HV cable ports to each side of the HV cable (Col 8, lines 60-67, Fig.2, No.207,209 teach coupler on cable port).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant invention to included, within Reyes system, CATV network and cable, as taught by Laubach to modify the system that provided the use of coupler to distribution signal go to different direction.

Consider **claims 33 and 34**, Reyes teaches the apparatus wherein the

reconditioner is a (repeater) regenerator (Page 2, Paragraph 35, Fig.1c No.152, 154,156 teach cascade amplifier means as repeater and regenerated).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 35 and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Laubach et al. (patent No.6,075,972).

Consider **claims 35 and 38**, Laubach teaches a repeater/regenerator for receiving and sending communication signals to an upstream segment and a downstream segment of a HV cable (Col 8, lines14-15, Fig.1, No.109 teach cascade amplifier which would as repeater/ regenerator for receiving and sending communication signals) the repeater comprising: an arrangement of downstream elements comprising a downstream preamplifier, equalizer, AGC amplifier and power amplifier where the downstream elements receives a downstream communication from the upstream segment and transmits a signal to the downstream segment (Col 4, lines 8-38, Col 8, lines14-15, Fig.1, No.109 teach CATV net work which would contain

equalizer, AGC amplifier and power amplifier for receive/transmit signals) an arrangement of upstream elements comprising an upstream preamplifier, equalizer, AGC amplifier and power amplifier where the upstream elements receive an upstream communication signal from the downstream segment and transmits a signal to the upstream segment (Col 4, lines 8-38, Col 8, lines 14-15, Fig. 1, No. 109 teach CATV network which would contain equalizer, AGC amplifier and power amplifier for receive/transmit signals) and direction couplers for directing the communication signals (Col 8, lines 64-67, Fig. 1, No. 110 teach directional coupler).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 36-37, 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laubach et al. (patent No. 6,075,972) in view of Beyers, II et al. (Patent No. 5,235,619).

Consider **claim 36**, Laubach teaches the claimed 35 limitations but fail to teach the repeater further comprising a control processor for monitoring and adjusting signal levels within the repeater.

In the same field of endeavor, Beyers teach "Cable Television Radio Frequency Subscribes Data Transmission Apparatus And RF Return Method". Further, Beyes teaches the repeater further comprising a control processor for monitoring and adjusting signal levels within the repeater (Col 46, lines 3-31 teach controller module that control processor for monitoring and adjusting signal levels means as calibration within system that had repeater).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant invention to included, within Laubach system, cable television radio frequency, as taught by Beyers to modify the system that would provided a better service and control in RF signals.

Consider **claims 37 and 40**, further Beyers teaches the processor further having a means for transferring information to a headend device (Col 49, lines 40-45 teach processor transferring information to a headend).

Consider **claim 39**, further Beyers teaches the repeater further comprising a control processor for monitoring and adjusting signal levels and for determining bit error rates within the regenerator (Col 46, lines 3-31, Col 53, lines 56-67 teach controller module that control processor for monitoring and adjusting signal levels means as calibration within system that had repeater and determining bit error rate).

Conclusion

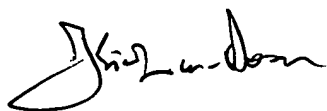
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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|--------------------|------------|-----------|
| 1. Bellows et al. | Patent No. | 5,920,802 |
| 2. Stifle et al. | Patent No. | 4,633,462 |
| 3. Dufresne et al. | Patent No. | 4,920,533 |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiet Doan whose telephone number is 703-305-4749. The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kiet Doan
Patent Examiner



WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600